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Some of these lectures were illustrated by means of lantern slides. Those of Prehistoric Anthropology and Archæology were as follows:

Silex tertiare otta	65
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Glaciers de forna	6
Portraits (P. Broca and others)	7
Quarternaire stratigraphie	48
Archæologic (bronze)	83
Paleothologic (stone)	91
Megalethiqus (dolmen)	19
Ethnographic (char.)	30
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In addition to the courses of lectures, which have now been continued for fourteen years past, and of which the foregoing are given as an example, there have been other lectures, either delivered by special lecturers or upon special subjects under the direction of the Society of Anthropology:

Eulogy of Dr. Paul Broca, by Monsieur Dally, 1884.

The Distinctive Characters of the Human Brain, by Monsieur Pozzi, 1885.

A Study of the Races of Mankind in the Lower Valley of the Nile, by Monsieur Hamy, 1886.

Aphasy Since the Time of Broca, by Monsieur Mathias Duval, 1887.

The Nervous Centers, by Monsieur Laborde, 1888.

(*To be continued.*)

MICROSCOPY.[1]

Medullated Nerve-Fibres.[2]—Prof. Kultschitzky offers the following methods designed to take the place of Weigert's hæmatoxylin method. Kultschitzky's method permits of washing the preparation after fixation, and so avoids, to a great extent, the precipitation of chromic salts in the tissues.

The material must lie in Erlicki's fluid 1–2 months, then be washed in water 1–2 days, and hardened in alcohol. Then follows imbedding in celloidin, and sectioning with the microtome in the usual way. The sections thus obtained are stained in

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[1] Edited by C. O. Whitman, Clark University, Worcester, Mass.

[2] Kultschitzky. *Anat. Anz.*, September 12, 1890, No. 18, p. 519.

ACID HÆMATOXYLIN.

Hæmatoxylin, 1 g., dissolved in a *small quantity* of absolute alcohol, added to acetic acid (two per cent.) 100 g.

One to three hours in the stain is generally sufficient. After staining, the sections are to be placed in a

LITHIUM SOLUTION.[3]

Lithium carbon. (saturated solution)	100 ccm.
Ferricyanide of potassium (one per cent. solution) .	10 ccm.

In this solution the sections generally remain from 2–3 hours. The time required for decoloration may be reduced by adding more ferricyanide of potassium. After decoloring, the sections are to be well washed in water, passed through alcohol, and mounted in balsam in the usual way.

Instead of the above hæmatoxylin solution, we may use with equal success

ACID CARMINE.

Carmine	2 g.
Acetic acid (10 per cent.)	100 ccm.

The powdered carmine is heated 2–4 hours in the acid, and the solution, after cooling, is then filtered. The time for staining is 24 hours. Decoloration is effected in the same manner as before. The process, however, is more rapid than with hæmatoxylin, and hence it must be closely watched.

Henneguy's Methods with Pelagic Fish-Eggs.[4]—The eggs may be killed in water strongly acidulated with acetic acid. In the course of a few minutes the embryo becomes quite distinct, and the eggs are then transferred to chromic acid, one per cent. At the end of three days they are placed in water, and the chorion removed. After 24 hours in water, they are placed in ninety per cent. alcohol, then in absolute alcohol. Such preparations are excellent for surface views, but difficult to section on account of the hardness of the yolk.

The isolation of the germ from the yolk may be accomplished in two ways:

1. The egg is placed in osmic acid, one per cent., for a few minutes, until it has acquired a light brown color, then transferred to Müller's fluid, and the chorion cut open with sharp scissors. In this fluid

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[3] Dr. J. Schaffer (*Anat. Anz.*, V., 22, November 21, 1890, p. 643) employed Weigert's borax-ferricyanide of potassium in place of this lithion solution, and with perfect success.

[4] *Journ. d'Anat. et de Physiol.*, 1888, pp. 416-7.

the yolk dissolves, and the cortical layer with the germ can thus be easily isolated. After several days the preparation is to be carefully washed and passed through several grades of alcohol.

This process does very well for the earlier stages, but not so well for the later ones, as the osmic acid does not penetrate the more advanced embryos sufficiently.

2. The method that proved the best was as follows: The egg is immersed for ten minutes in Kleinenberg's fluid, to which has been added one-tenth its volume of glacial acetic acid; it is then opened in ten per cent. acetic acid, which dissolves the yolk, and thus enables one to isolate the germ. The germ is next placed in Kleinenberg's fluid for several hours, then in alcohol.

Bryozoa.[5]—In studying the process of budding in Pedicellina, Loxosoma, and other Bryozoa, Dr. Oswald Seeliger made use of corrosive sublimate (saturated solution in hot sea-water), usually in combination with one-fiftieth its volume of glacial acetic acid. This mixture was used cold, and allowed to act from five to eight minutes. The preparation was thoroughly washed and stained with borax-carmine. To this sublimate-acetic acid mixture was sometimes added chromic acid (one-tenth per cent.), with the result that the epithelial structure was well preserved but difficult to stain.

Caryokinesis in Paramæcium.[6]—In the study of Paramæcium Prof. R. Hertwig made use of picro-acetic acid, chromic acid, and chrom-osmic acid as hardening reagents. Picro-acetic acid followed by borax-carmine was the principal method. The staining process was aided by the heat of an incubator, and decoloration was effected by alcohol acidulated with hydrochloric acid. The preparation was mounted in glycerine or in clove oil. Clove oil is preferable to balsam, as it reveals more clearly the fibrous structure of the spindle, and allows of turning and pressing the object at any time.

Clove oil causes the cytoplasm to become brittle, so that the body of the infusorian may be broken up by pressure or blows on the cover-glass, and thus the nuclear spindles be set completely free. In this isolated condition they can be studied to the best advantage, as they are not obscured by overlying cytoplasm.

For the study of the achromatic figures clove oil is too strong a clarifying medium. Glycerine or water will serve better. Hertwig examined the preparation first in clove oil, then isolated the nuclear figures, washed in alcohol, and mounted in glycerine. He was thus able to study all parts of the figures under most favorable conditions.

[5] *Zeitschrift f. wiss. Zoologie*, XLIX., 1, 1889, pp. 168–9; and L., 4, 1890, p. 561.

[6] R. Hertwig. Conjugation d. Infusorien. Abhl. d. k. bayer. Akad. d. Wiss., II. Cl., XVII. Bd., I. Abth., 1889, pp. 4–5.